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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/922,508 | 08/03/2001 | Steven R. Sweitzer | GODG-1700 | 8844 |

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EXAMINER

WANG, TED M

ART UNIT PAPER NUMBER

2634

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/922,508

Applicant(s)

SWEITZER ET AL.

Examiner

Ted M Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 14-21, 25-34 and 38-45 is/are rejected.
- 7) ☒ Claim(s) 11-13, 22-24, 35-37 and 46-48 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/14/2002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. New corrected drawings in compliance with 37 CFR 1.121(d) is required in this application because the informal drawings Fig.1-Fig.5B are not of sufficient quality. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.
2. The drawings are objected to because
 - On Fig.1 element 104, "SLAC1" and "SLAC8" should be changed to -- SLIC1 -- and -- SLIC8 --, respectively, as described in page 4; and
 - On Fig.3 element 310, "V34 Upstream EC" should be changed to -- Echo cancellation circuit --.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:
 - On page 18 line 12, change "370" to -- 340--.
 - On page 19 lines 18 and page 21 lines 4, change " Figure 1" to -- Figure 2--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

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4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 6, 17, 30, and 41 recites the limitation "detecting a S/Sbar signal" in line 2. The S/Sbar signal is indefinite since it has not been defined either in the claim or in the specification. The examiner has searched S/Sbar in the US patent (EAST database) field and found the following meanings:

- S (or Sbar): Similar to Sh, but used for primary channel, where Sh (or Shbar): A signal transmitted by alternating between point 0 rotated by 180 degrees and the same point rotated counterclockwise by 270 degrees, and used for control channel; or
- S/Sbar: secondary/stackable broadband access router; or
- Sbar: semiconductor bulk acoustic resonator; ... etc.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5, 7, 8, 14-16, 18-19, 25-29, 31, 32, 38-40, 42, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruether et al. (US 6,151,364) in view of Warke et al. (US 6,516,025).

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- With regard claims 1, 14, 25, and 38, which are the related method and system claims, Ruether et al., cited by the applicant, discloses a method of recovering PCM modem data in a data network, comprising the steps of:
retrieving downstream data path transmission information (Fig.4 elements 422-426) from said data transmission in said upstream data path (Fig.4 elements 42, 429, and column 7 lines 8-11); and
reconstructing PCM data in said downstream data path (Fig.4 elements 422-426) based on said retrieved downstream data path transmission information in said upstream data path (Fig.4 elements 42, 429, and column 7 lines 8-11); and
transmitting said reconstructed PCM data (Fig.4 element 424 output and column 6 lines 28-43).

Ruether et al. discloses all of the subject matter as described above except for specifically teaching

- 1) monitoring data transmission in an upstream data path of a V.90 modem call communication; and
- 2) detecting a handshake protocol in said data transmission.

With regard 1), Warke et al. teaches that monitoring data transmission in an upstream data path of a V.90 modem call communication (Fig.7, Fig.8, column 12 lines 53-67, and column 17 line 66 – column 18 line 7). It is desirable to monitor data transmission in an upstream data path of a V.90 modem call communication since it provides improved stream data rates and symbol error rate (column 18 lines 8-30).

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With regard 2), Warke et al. further teaches detecting a handshake protocol in said data transmission (Fig.7 column 12 lines 53-67, Fig.8 elements 46, 48, 64, 66, and 68, Fig.9, and column 13 line 51 – column 18 line 10). It is desirable to detecting a handshake protocol in said data transmission improve the data rates within the specified error rate (column 14 lines 14-20).

Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the method as taught by Wake et al. in which, monitoring data transmission in an upstream data path of a V.90 modem communication and detecting a handshake protocol in said data transmission, into Reuters' code circuit so as to improved stream data rate and symbol error rate and improve the data rates within the specified error rate.

- With regard claims 2, 15, 26, and 39, which are the related method and system claims, Ruther et al. further discloses that data transmission in said upstream data path direction is received from a client modem (column 2 line 57 –column 3 line 24 and column 6 lines 28-43).
- With regard claims 3 and 27, which are the related method and system claims, all limitation is contained in claim 14. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claims 4, 16, 28, and 40, which are the related method and system claims, Ruether et al. and Wake et al. discloses all of the subject matter as described above except for specifically teaching the step of initializing a state machine to a call start state.

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However, Wake et al. further teaches the step of initializing a state machine to a call start state (Fig.7, column 12 line 53- column 13 lines 26-50, Fig.8, and Fig.9). Here, examiner considers the state machine can be implemented with the flow diagram as shown in Fig.8 and Fig.9.

It is desirable to include the step of initializing a state machine (flow diagram) to a call start state in order to improve the connection between modems. Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the method as taught further by Wake et al. in which, including the step of initializing a state machine (flow diagram) to a call start state, into Reuter et al and Wakes' code circuit so as to improve the connection between modems and improve the data rates within the specified error rate.

- With regard claims 5 and 29, which are the related method and system claims, all limitation is contained in claim 14. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claims 7, 18, 31, and 42, which are the related method and system claims, Ruther et al. further discloses that retrieving step includes the step of decoding said downstream data path transmission information (Fig.4 element 42 Code).
- With regard claims 8, 19, 32, and 43, which are the related method and system claims, Ruther et al. further discloses that including the step of echo canceling said data transmission in said upstream data path (Fig.4 element 429).

8. Claims 9, 10, 20, 21, 33, 34, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruther et al. (US 6,151,364) and Wake et al. (US 6,516,025) as

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applied to claims 1, 14, 25, and 38 above, and further in view of Abdullah et al. (US 6,341,360).

- With regard claims 9, 20, 33, and 44, which are the related method and system claims, Ruther et al. and Wake et al. discloses all of the subject Matter as described above except for specifically teaching said step of reconstructing includes the step of performing data rate conversion.

However, Abdullah et al. teaches said step of reconstructing includes the step of performing data rate conversion (Fig.3 elements 66, 94, and column 8 line 15-46, and column 2 lines 28-45). One skilled in the art would have clearly recognized that a V.34 modem analog input is sampled at 8000 samples/second, and converted and operated at 3200 samples/second at output as shown in Fig.3 element 66 and described in above cited reference.

It is desirable to include the step of reconstructing includes the step of performing data rate conversion in order to accelerate data downstream from the internet or other information source to a subscriber's computer (column 2 lines 9-27).

Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the method as taught by Abdullah et al. in which, performing data rate conversion, into Ruther et al. and Wakes' retrieving downstream data path so as to improve the downstream data transformation rate.

- With regard claims 10, 21, 34, and 45, which are the related method and system claims, all limitation is contained in claim 9. The explanation of all the limitation is already addressed in the above paragraph.

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Allowable Subject Matter

9. Claims 11-13, 22-24, 35-37, and 46-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. Reference(s) US 5,528,625 and US 5,790,594 are cited because they are put pertinent to the PCM modem with time recovery. However, none of references teach detailed connection as recited in claim.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M Wang whose telephone number is (571) 272-3053. The examiner can normally be reached on 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Ted M Wang
Examiner
Art Unit 2634

Ted M. Wang



**SHUWANG LIU
PRIMARY EXAMINER**